

WHAT IS CLAIMED IS:

1. An apparatus comprising a tag having circuitry which includes:

5 a receiver section operable to receive wireless signpost signals that each include a signpost code; and

a transmitter section operable to transmit wireless beacon signals which each include a beacon code associated with said tag, said transmitter section being
10 responsive to receipt by said receiver section of a respective said signpost signal for including in at least one said beacon signal the signpost code from the received signpost signal;

wherein said transmitter section is operable to
15 transmit said beacon signals in a selected one of first and second formats which are different, said transmitter section using said first format in response to receipt of one of said signpost signals and using said second format in response to the absence of receipt of any of said
20 signpost signals for a specified time interval, said first format including a signpost field containing the signpost code from the most recently received signpost signal, and said second format lacking said signpost field and being shorter in length than said first format.

2. A method comprising the steps of:

receiving in a receiver section of a tag wireless signpost signals that each include a signpost code; and

5 transmitting from a transmitter section of said tag wireless beacon signals which each include a beacon code associated with said tag, said transmitting step including the steps of:

10 causing said transmitter section to be responsive to receipt by said receiver section of a respective said signpost signal for including in at least one said beacon signal the signpost code from the received signpost signal; and

15 causing said transmitter section to transmit said beacon signals in a selected one of first and second formats which are different, said transmitter section using said first format in response to receipt of one of said signpost signals and using said second format in response to the absence of receipt of any of said
20 signpost signals for a specified time interval, said first format including a signpost field containing the signpost code from the most recently received signpost signal, and said second format lacking said signpost field and being shorter in length than said first format.

3. An apparatus comprising a tag having circuitry which includes:

5 a receiver section operable to receive wireless signpost signals that each include a signpost code; and

10 a transmitter section operable to transmit wireless beacon signals which each include a beacon code associated with said tag, said transmitter section being responsive to receipt by said receiver section of a respective said signpost signal for including in at least one said beacon signal the signpost code from the received signpost signal;

15 wherein said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals.

20 4. An apparatus according to Claim 3, wherein said transmitter section is operative to carry out said variation by:

25 transmitting a first series of said beacon signals containing the signpost code at a first transmission power level; and

30 thereafter transmitting a second series of said beacon signals containing the signpost code at a second transmission power level which is higher than said first transmission power level, said first series being transmitted at a effective first rate which is substantially higher than an effective second rate at which said second series is transmitted.

5. An apparatus according to Claim 4,

wherein said transmission of said first series is carried out by defining a plurality of successive first time slots and transmitting each of said beacon signals of said first series at a substantially randomly selected time within a respective said first time slot; and

wherein said transmission of said second series is carried out by defining a plurality of successive second time slots and transmitting each of said beacon signals of said second series at a substantially randomly selected time within a respective said second time slot, said second time slots being substantially longer than said first time slots.

6. An apparatus according to Claim 4, wherein said first rate is at least ten times said second rate.

7. An apparatus according to Claim 4, wherein said transmitter section is further operative to carry out said variation by inhibiting transmission of said beacon signals during a time interval which occurs between transmission of said first and second series.

8. An apparatus according to Claim 4, wherein said transmitter section is further operative to carry out said variation by transmitting, after said first series and before said second series, a third series of said beacon signals containing the signpost code at said first transmission power level and at an effective third rate which is less than said first rate and greater than said second rate.

9. An apparatus according to Claim 8, wherein said transmission of said third series is carried out by defining a plurality of successive third time slots and transmitting each of said beacon signals of said third series at a substantially randomly selected time within a respective said third time slot, said third time slots being substantially longer than said first time slots and substantially shorter than said second time slots.

10. An apparatus according to Claim 8, wherein said first rate is approximately ten times said third rate, and said third rate is approximately ten times said second transmission rate.

11. An apparatus according to Claim 8, wherein said transmitter section is further operative to carry out said variation by inhibiting transmission of said beacon signals during each of first and second time intervals, said first time interval occurring between said first and third series, and said second time interval occurring between said third and second series.

12. A method, comprising the steps of:

receiving in a receiver section of a tag wireless signpost signals that each include a signpost code; and

transmitting from a transmitter section of said tag wireless beacon signals which each include a beacon code associated with said tag, said transmitting step including the steps of:

causing said transmitter section to be responsive to receipt by said receiver section of a respective said signpost signal for including in at least one said beacon signal the signpost code from the received signpost signal; and

causing said transmitter section to be responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals.

13. A method according to Claim 12, wherein said step of automatically effecting variation includes the steps of:

transmitting a first series of said beacon signals containing the signpost code at a first transmission power level; and

thereafter transmitting a second series of said beacon signals containing the signpost code at a second transmission power level which is higher than said first transmission power level, said first series being transmitted at a effective first rate which is substantially higher than an effective second rate at which said second series is transmitted.

14. A method according to Claim 13,

wherein said step of transmitting said first series is carried out by defining a plurality of successive first time slots and transmitting each of said beacon signals of said first series at a substantially randomly selected time within a respective said first time slot; and

wherein said step of transmitting said second series is carried out by defining a plurality of successive second time slots and transmitting each of said beacon signals of said second series at a substantially randomly selected time within a respective said second time slot, said second time slots being substantially longer than said first time slots.

15. A method according to Claim 13, including the step of selecting said first rate to be at least ten times said second rate.

16. A method according to Claim 13, wherein said step of automatically effecting variation further includes the step of inhibiting transmission of said beacon signals during a time interval which occurs between transmission of said first and second series.

17. A method according to Claim 13, wherein said step of automatically effecting variation further includes the step of transmitting, after said first series and before said second series, a third series of
5 said beacon signals containing the signpost code at said first transmission power level and at an effective third rate which is less than said first rate and greater than said second rate.

10 18. A method according to Claim 17, wherein said step of transmitting said third series is carried out by defining a plurality of successive third time slots and transmitting each of said beacon signals of said third
15 series at a substantially randomly selected time within a respective said third time slot, said third time slots being substantially longer than said first time slots and substantially shorter than said second time slots.

20 19. A method according to Claim 17, including the steps of selecting said first rate to be approximately ten times said third rate, and selecting said third rate to be approximately ten times said second transmission rate.

25 20. A method according to Claim 17, wherein said step of automatically effecting variation further includes the step of inhibiting transmission of said beacon signals during each of first and second time
30 intervals, said first time interval occurring between said first and third series, and said second time interval occurring between said third and second series.

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